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RAW SEQUENCE LISTING

DATE: 02/26/2002

PATENT APPLICATION: US/10/006,922

TIME: 09:35:40

Input Set : N:\Crf3\Datahold\EFS\10006922\SEQUENCELISTING.txt

Output Set: N:\CRF3\02262002\J006922.raw

ENTERED

3 <110> APPLICANT: Lukyanov, Sergey A
4 Fradkov, Arcady F.
5 Labas, Yulii A.
6 Matz, Mikhail V.
7 Terskikh, Alexey
9 <120> TITLE OF INVENTION: Novel Chromophores/Fluorophores and
10 Methods for Using the Same
13 <130> FILE REFERENCE: CLON-035CIP
15 <140> CURRENT APPLICATION NUMBER: US/10/006,922
16 <141> CURRENT FILING DATE: 2001-12-04
18 <150> PRIOR APPLICATION NUMBER: 09/120,330
19 <151> PRIOR FILING DATE: 1998-12-11
21 <150> PRIOR APPLICATION NUMBER: 09/457,898
22 <151> PRIOR FILING DATE: 1999-12-09
24 <150> PRIOR APPLICATION NUMBER: 09/458,144
25 <151> PRIOR FILING DATE: 1999-12-09
27 <150> PRIOR APPLICATION NUMBER: 09/458,477
28 <151> PRIOR FILING DATE: 1999-12-09
30 <150> PRIOR APPLICATION NUMBER: 09/457,556
31 <151> PRIOR FILING DATE: 1999-12-09
33 <150> PRIOR APPLICATION NUMBER: 09/444,338
34 <151> PRIOR FILING DATE: 1999-11-19
36 <160> NUMBER OF SEQ ID NOS: 46
38 <170> SOFTWARE: FastSEQ for Windows Version 4.0
40 <210> SEQ ID NO: 1
41 <211> LENGTH: 687
42 <212> TYPE: DNA
43 <213> ORGANISM: anemonia majano
45 <400> SEQUENCE: 1
46 atggctcttt caaacaagtt tatcgagat gacatgaaaa tgacctacca tatggatggc 60
47 tgtgtcaatg ggcattactt taccgtcaaa ggtgaaggca acgggaagcc atacgaaggg 120
48 acgcagacct cgacttttaa agtcaccatg gccaacggtg ggccccttgc attctccttt 180
49 gacatactat ctacagtgtt caagtatgga aatcgatgct ttactgcgta tcctaccagt 240
50 atgcccgaact atttcaaaca agcatttcct gacggaatgt catatgaaag gacttttacc 300
51 tatgaagatg gaggagttgc tacagccagt tgggaaataa gccttaaagg caactgcttt 360
52 gaggacaaat ccacgtttca tggagtgaac ttctctgctg atggacctgt gatggcgaag 420
53 atgacaactg gttgggaccc atcttttgag aaaatgactg tctgcgatgg aatattgaag 480
54 ggtgatgtca ccgcgttcct catgctgcaa ggaggtggca attacagatg ccaattccac 540
55 acttcttaca agacaaaaaa accggtgacg atgccaccaa accatgcggt ggaacatcgc 600
56 attgcgagga ccgaccttga caaaggtggc aacagtgttc agctgacgga gcacgctgtt 660
57 gcacatataa cctctgttgt ccctttc 687
59 <210> SEQ ID NO: 2
60 <211> LENGTH: 229

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61 <212> TYPE: PRT
62 <213> ORGANISM: anemonia majano
64 <400> SEQUENCE: 2
65 Met Ala Leu Ser Asn Lys Phe Ile Gly Asp Asp Met Lys Met Thr Tyr
66 1 5 10 15
67 His Met Asp Gly Cys Val Asn Gly His Tyr Phe Thr Val Lys Gly Glu
68 20 25 30
69 Gly Asn Gly Lys Pro Tyr Glu Gly Thr Gln Thr Ser Thr Phe Lys Val
70 35 40 45
71 Thr Met Ala Asn Gly Gly Pro Leu Ala Phe Ser Phe Asp Ile Leu Ser
72 50 55 60
73 Thr Val Phe Lys Tyr Gly Asn Arg Cys Phe Thr Ala Tyr Pro Thr Ser
74 65 70 75 80
75 Met Pro Asp Tyr Phe Lys Gln Ala Phe Pro Asp Gly Met Ser Tyr Glu
76 85 90 95
77 Arg Thr Phe Thr Tyr Glu Asp Gly Gly Val Ala Thr Ala Ser Trp Glu
78 100 105 110
79 Ile Ser Leu Lys Gly Asn Cys Phe Glu His Lys Ser Thr Phe His Gly
80 115 120 125
81 Val Asn Phe Pro Ala Asp Gly Pro Val Met Ala Lys Met Thr Thr Gly
82 130 135 140
83 Trp Asp Pro Ser Phe Glu Lys Met Thr Val Cys Asp Gly Ile Leu Lys
84 145 150 155 160
85 Gly Asp Val Thr Ala Phe Leu Met Leu Gln Gly Gly Gly Asn Tyr Arg
86 165 170 175
87 Cys Gln Phe His Thr Ser Tyr Lys Thr Lys Lys Pro Val Thr Met Pro
88 180 185 190
89 Pro Asn His Ala Val Glu His Arg Ile Ala Arg Thr Asp Leu Asp Lys
90 195 200 205
91 Gly Gly Asn Ser Val Gln Leu Thr Glu His Ala Val Ala His Ile Thr
92 210 215 220
93 Ser Val Val Pro Phe
94 225

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97 <210> SEQ ID NO: 3
98 <211> LENGTH: 1116
99 <212> TYPE: DNA
100 <213> ORGANISM: Clavularia species
102 <220> FEATURE:
103 <221> NAME/KEY: misc_feature
104 <222> LOCATION: 8, 12, 13, 17, 65, 77, 102, 104
105 <223> OTHER INFORMATION: n = A,T,C or G
107 <400> SEQUENCE: 3

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W--> 108 tatagganca tnnnggngat tgggggtccaa agcattgttaa ccaacgcaga taacccccag 60
W--> 109 tgggtntcaaa cgcaganaac gcgggaacat tggaaaattg antnttaagg aggcaaggaa 120
110 tcgggagtaa agttgcgaga aactgaaaaa atgaagtgtta aatttgtgtt ctgcctgtcc 180
111 ttcttggtcc tcgccatcac aaacgcgaac atttttttga gaaacgaggc tgacttagaa 240
112 gagaagacat tgagaatacc aaaagctcta accaccatgg gtgtgattaa accagacatg 300
113 aagattaagc tgaagatgga aggaaatgta aacgggcatg cttttgtgat cgaaggagaa 360
114 ggagaaggaa agccttacga tgggacacac actttaaac tgggaagttaa ggaaggtgcg 420

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115 cctctgcctt tttcttacga tatcttgta aacgcgttcc agtacggaaa cagagcattg 480
116 acaaaatacc cagaagatat agcagactat ttcaagcagt cgtttcccga gggatattcc 540
117 tgggaaagaa ccatgacttt tgaagacaaa ggcattgtca aagtgaaaag tgacataagc 600
118 atggaggaag actcctttat ctatgaaatt cgttttgatg ggatgaactt tcctcccaat 660
119 ggtccggtta tgcagaaaaa aactttgaag tgggaacat ccactgagat tatgtacgtg 720
120 cgtgatggag tgctggtcgg agatattagc cattctctgt tgctggaggg aggtggccat 780
121 taccgatgtg acttcaaaag tatttcaaaa gcaaaaaaag ttgtcaaat gccagactat 840
122 cactttgtgg accatcgcat tgagatcttg aaccatgaca aggattacaa caaagtaacg 900
123 ctgtatgaga atgcagttgc tcgctattct ttgctgcaa gtcaggccta gacaacaagg 960
124 atactgaaaa catatttgtc tgagggtttg tgtgttttt taaaagacat cagctcagca 1020
125 ttcgtaggtt gtaacaaaaa atagctttaa ttttggtgg gattaaatca tagggatttg 1080
126 ttttagtaat cattttgctt aataaaaagt gccttg 1116
128 <210> SEQ ID NO: 4
129 <211> LENGTH: 266
130 <212> TYPE: PRT
131 <213> ORGANISM: Clavularia species
133 <400> SEQUENCE: 4
134 Met Lys Cys Lys Phe Val Phe Cys Leu Ser Phe Leu Val Leu Ala Ile
135 1 5 10 15
136 Thr Asn Ala Asn Ile Phe Leu Arg Asn Glu Ala Asp Leu Glu Glu Lys
137 20 25 30
138 Thr Leu Arg Ile Pro Lys Ala Leu Thr Thr Met Gly Val Ile Lys Pro
139 35 40 45
140 Asp Met Lys Ile Lys Leu Lys Met Glu Gly Asn Val Asn Gly His Ala
141 50 55 60
142 Phe Val Ile Glu Gly Glu Gly Glu Gly Lys Pro Tyr Asp Gly Thr His
143 65 70 75 80
144 Thr Leu Asn Leu Glu Val Lys Glu Gly Ala Pro Leu Pro Phe Ser Tyr
145 85 90 95
146 Asp Ile Leu Ser Asn Ala Phe Gln Tyr Gly Asn Arg Ala Leu Thr Lys
147 100 105 110
148 Tyr Pro Asp Asp Ile Ala Asp Tyr Phe Lys Gln Ser Phe Pro Glu Gly
149 115 120 125
150 Tyr Ser Trp Glu Arg Thr Met Thr Phe Glu Asp Lys Gly Ile Val Lys
151 130 135 140
152 Val Lys Ser Asp Ile Ser Met Glu Glu Asp Ser Phe Ile Tyr Glu Ile
153 145 150 155 160
154 Arg Phe Asp Gly Met Asn Phe Pro Pro Asn Gly Pro Val Met Gln Lys
155 165 170 175
156 Lys Thr Leu Lys Trp Glu Pro Ser Thr Glu Ile Met Tyr Val Arg Asp
157 180 185 190
158 Gly Val Leu Val Gly Asp Ile Ser His Ser Leu Leu Leu Glu Gly Gly
159 195 200 205
160 Gly His Tyr Arg Cys Asp Phe Lys Ser Ile Tyr Lys Ala Lys Lys Val
161 210 215 220
162 Val Lys Leu Pro Asp Tyr His Phe Val Asp His Arg Ile Glu Ile Leu
163 225 230 235 240
164 Asn His Asp Lys Asp Tyr Asn Lys Val Thr Leu Tyr Glu Asn Ala Val
165 245 250 255

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166 Ala Arg Tyr Ser Leu Leu Pro Ser Gln Ala
167           260           265
170 <210> SEQ ID NO: 5
171 <211> LENGTH: 693
172 <212> TYPE: DNA
173 <213> ORGANISM: Zoanthus species
175 <400> SEQUENCE: 5
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177 tgcgtcgtatg gacataaatt tgtgatcacg ggagagggca ttggatatcc gttcaaaggg 120
178 aaacaggcta ttaatctgtg tgtggtcgaa ggtggacat tgccatttgc cgaagacata 180
179 ttgtcagctg cctttatgta cggaaacagg gttttcactg aatatacctca agacatagct 240
180 gactatttca agaactcgtg tctgtctggt tatacatggg acaggtcttt tctctttgag 300
181 gatggagcag tttgcatatg taatgcagat ataacagtga gtgttgaaga aaactgcatg 360
182 tatcatgagt ccaaatttta tggagtgaat tttctgctg atggacctgt gatgaaaaag 420
183 atgacagata actgggagcc atcctgcgag aagatcatac cagtacctaa gcaggggata 480
184 ttgaaagggg atgtctccat gtacctcctt ctgaaggatg gtgggcgttt acggtgccaa 540
185 ttcgacacag ttacaaaagc aaagtctgtg ccaagaaaga tgccggactg gcacttcac 600
186 cagcataagc tcaccctgta agaccgcagc gatgctaaga atcagaaatg gcactctgaca 660
187 gaacatgcta ttgcatccgg atctgcattg ccc 693
189 <210> SEQ ID NO: 6
190 <211> LENGTH: 231
191 <212> TYPE: PRT
192 <213> ORGANISM: Zoanthus species
194 <400> SEQUENCE: 6
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196 1           5           10           15
197 Arg Met Glu Gly Cys Val Asp Gly His Lys Phe Val Ile Thr Gly Glu
198           20           25           30
199 Gly Ile Gly Tyr Pro Phe Lys Gly Lys Gln Ala Ile Asn Leu Cys Val
200           35           40           45
201 Val Glu Gly Gly Pro Leu Pro Phe Ala Glu Asp Ile Leu Ser Ala Ala
202           50           55           60
203 Phe Asn Tyr Gly Asn Arg Val Phe Thr Glu Tyr Pro Gln Asp Ile Ala
204 65           70           75           80
205 Asp Tyr Phe Lys Asn Ser Cys Pro Ala Gly Tyr Thr Trp Asp Arg Ser
206           85           90           95
207 Phe Leu Phe Glu Asp Gly Ala Val Cys Ile Cys Asn Ala Asp Ile Thr
208           100          105          110
209 Val Ser Val Glu Glu Asn Cys Met Tyr His Glu Ser Lys Phe Tyr Gly
210           115          120          125
211 Val Asn Phe Pro Ala Asp Gly Pro Val Met Lys Lys Met Thr Asp Asn
212           130          135          140
213 Trp Glu Pro Ser Cys Glu Lys Ile Ile Pro Val Pro Lys Gln Gly Ile
214 145          150          155          160
215 Leu Lys Gly Asp Val Ser Met Tyr Leu Leu Leu Lys Asp Gly Gly Arg
216           165          170          175
217 Leu Arg Cys Gln Phe Asp Thr Val Tyr Lys Ala Lys Ser Val Pro Arg
218           180          185          190
219 Lys Met Pro Asp Trp His Phe Ile Gln His Lys Leu Thr Arg Glu Asp

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220          195          200          205
221 Arg Ser Asp Ala Lys Asn Gln Lys Trp His Leu Thr Glu His Ala Ile
222      210          215          220
223 Ala Ser Gly Ser Ala Leu Pro
224 225          230
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228 <211> LENGTH: 865
229 <212> TYPE: DNA
230 <213> ORGANISM: Zoanthus species
232 <400> SEQUENCE: 7
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234 catggtcat tcaaagcacg gtctaaaaga agaaatgaca atgaaatacc acatggaagg 120
235 gtgcgtcaac ggacataaat ttgtgatcac gggcgaaggc attggataatc cgttcaaagg 180
236 gaaacagact attaatctgt gtgtgatcga agggggacca ttgccatttt ccgaagacat 240
237 attgtcagct ggctttaagt acggagacag gattttcact gaatatcctc aagacatagt 300
238 agactatttc aagaactcgt gtctgtctgg atatacatgg ggcaggtctt ttctctttga 360
239 ggatggagca gtctgcatat gcaatgtaga tataacagtg agtgtcaaag aaaactgcat 420
240 ttatcataag agcatattta atggaatgaa ttttcctgct gatggacctg tgatgaaaaa 480
241 gatgacaact aactgggaag catcctgcga gaagatcatg ccagtaccta agcaggggat 540
242 actgaaaggg gatgtctcca tgtacctcct tctgaaggat ggtgggcgtt accggtgccca 600
243 gttcgacaca gtttacaagg caaagtctgt gccaaagtaag atgccggagt ggcacttcat 660
244 ccagcataag ctctccgtg aagaccgcag cgatgctaag aatcagaagt ggcagctgac 720
245 agagcatgct attgcattcc cttctgcctt ggcctgataa gaatgtagtt ccaacatttt 780
246 aatgcattgt cttgtcaatt attctgataa aaatgtagtt gagttgaaaa cagacaagta 840
247 caaataaagc acatgtaaat cgtct
249 <210> SEQ ID NO: 8
250 <211> LENGTH: 230
251 <212> TYPE: PRT
252 <213> ORGANISM: Zoanthus species
254 <400> SEQUENCE: 8
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256 1          5          10          15
257 His Met Glu Gly Cys Val Asn Gly His Lys Phe Val Ile Thr Gly Glu
258      20          25          30
259 Gly Ile Gly Tyr Pro Phe Lys Gly Lys Gln Thr Ile Asn Leu Cys Val
260      35          40          45
261 Ile Glu Gly Gly Pro Leu Pro Phe Ser Glu Asp Ile Leu Ser Ala Gly
262      50          55          60
263 Phe Lys Tyr Gly Asp Arg Ile Phe Thr Glu Tyr Pro Gln Asp Ile Val
264 65          70          75          80
265 Asp Tyr Phe Lys Asn Ser Cys Pro Ala Gly Tyr Thr Trp Gly Ser Phe
266      85          90          95
267 Leu Phe Glu Asp Gly Ala Val Cys Ile Cys Asn Val Asp Ile Thr Val
268      100         105         110
269 Ser Val Lys Glu Asn Cys Ile Tyr His Lys Ser Ile Phe Asn Gly Met
270      115         120         125
271 Asn Phe Pro Ala Asp Gly Pro Val Met Lys Lys Met Thr Thr Asn Trp
272      130         135         140
273 Glu Ala Ser Cys Glu Lys Ile Met Pro Val Pro Lys Gln Gly Ile Leu

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VERIFICATION SUMMARY

PATENT APPLICATION: US/10/006,922

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Input Set : N:\Crf3\Datahold\EFS\10006922\SEQUENCELISTING.txt

Output Set: N:\CRF3\02262002\J006922.raw

L:15 M:270 C: Current Application Number differs, Replaced Current Application Number

L:108 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:3

L:109 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:3